

IN THE CLAIMS:

Please add the following new claims:

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21. A method of heating glass contacting surfaces, comprising the steps of:

at the start of production, heating said glass contacting surfaces using MAPP gas with the addition of approximately 10% air; and

after said glass contacting surfaces have warmed-up, said glass contacting surfaces are heated with MAPP gas only.

22. A method according to claim 21, wherein:

said glass contacting surfaces include deep molds, and wherein at least 3% air is added to said MAPP gas.

23. A method according to claim 21, wherein:

to eliminate check marks on glassware, dead plates and transfer stations, said MAPP gas is mixed with approximately 5% air.

24. A method of heating glass contacting surfaces in ring and plunger assemblies, comprising the steps of:

heating said glass contacting surfaces to a predetermined operating temperature;

said heating of said glass contacting surfaces is accomplished by combustion of a predetermined gas in a flame; and

said heating of said glass contacting surfaces utilizes MAPP gas mixed with approximately 40% of natural gas to ensure the best heat control to eliminate the condition called glass press-up.

25. A method of heating glass contacting surfaces when large punch bowls or large pitchers are in production, comprising the steps of:

heating said glass contacting surfaces to a predetermined temperature;

said heating of said glass contacting surfaces is accomplished by combustion of a predetermined gas in a flame; and

said heating of said glass contacting surfaces is accomplished by using MAPP gas mixed with at least 20% natural gas.

26. A method of heating glass contacting surfaces to attain a balance of letting unsaturated hydrocarbons release heat and produce carbon thermal barriers in a uniform process, comprising the steps of:

heating said glass contacting surfaces by combustion of a predetermined gas mixture in a flame;

introducing through a main line a 100% MAPP gas mixture;

connecting to said main line an air line with a first venturi;

connecting to said main line a natural gas line with a second venturi; and

obtaining said predetermined gas mixture by blending said MAPP gas mixture with air and/or natural gas.

27. A method accordingly to claim 26, wherein:

said heating of said glass contacting surfaces is started with a 100% mixture of MAPP gas;

thereafter, to limit carbon skeleton formation, there is introduced a small quantity of natural gas which has extra hydrogen atoms that give a suppressive influence for carbon formation; and

maintaining this reaction to avoid any chance of dirty molds or other dirty glass contacting surfaces.

28. A method according to claim 27, wherein:

if propagation of carbon skeletons is too abundant, turning off the supply of said MAPP gas for a predetermined period of time.

29. A method according to claim 26, wherein:

said 100% mixture of MAPP gas is mixed with air to produce a heat transfer system which will maintain at least  $1800^{\circ}\text{K}$  at all times.

A | Please cancel original claims 11 and 12 without prejudice, and without abandonment or dedication of the subject matter thereof, and substitute therefor the following new claim 30:

30. A hydrocarbon fuel gas mixture especially suited for heating glass contacting surfaces and/or lubricating purposes, comprising:

a hydrocarbon fuel gas mixture which includes approximately 90% by volume of MAPP gas and approximately 10% by volume of propane.

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REMARKS

Upon entry of the present amendment, the claims in the application are original claims 1-10 and 13-20, and new claims 21-30.

Original claims 1-20 were originally rejected under 35 USC 112, based on the Examiner's contention that the term "MAPP gas" is indefinite. Applicant respectfully traverse this rejection based on the following.

Applicant respectfully submits that "MAPP" is a registered trademark for the stabilized liquified mixture of methylacetylene ( $\text{CH}_3\text{:C:CH}$ ) and propadiene ( $\text{CH}_2\text{:C:CH}_2$ ) gases. In particular, MAPP gas is a specific one of approximately 26 different methylacetylene-propadiene (MPS) gases marketed.

The gases mixed to produce MAPP gas both have the same atomic composition. This means that three carbon and four hydrogen atoms are present in each molecule of gas. Molecules of each gas therefore have the same mass and size, even though they are shaped differently. Because they are the same mass and size, the gas molecules form a stable mixture which remains uniformly mixed in the cylinder. This stabilization of mixture assures a uniform and consistent flame for easier quality control.

In support of the foregoing, applicant respectfully directs attention to the textbook entitled "Welding Principles and Applications" and to United States Trademark Registration 745,630 for the mark "MAPP".

In light of the foregoing, it is respectfully submitted that the term "MAPP gas" is quite definite to a person skilled in this particular area of technology.

In view of the foregoing, applicant respectfully requests that Examiner reconsider the 35 USC 112 rejection with a view toward withdrawing same.

Original claims 11 and 12 were initially rejected on the contention that they are anticipated by Seeman' 918. Original claims 11 and 12 have now been cancelled in favor of claim 30.

It is respectfully submitted that claim 30 is not anticipated by Seeman '918. In particular, it is respectfully submitted that Seeman '918 does not disclose a hydrocarbon fuel mixture which includes approximately 90% by volume of MAPP gas and approximately 10% by volume of propane.

Accordingly, it is respectfully requested that the Examiner reconsider the 35 USC 102 rejection with a view toward withdrawing same.

Original claims 1-10 were originally rejected under 35 USC 103 as allegedly being unpatentable over Virey. Applicant respectfully traverses this rejection based on the following.

The Examiner concedes that Virey does not teach the use of MAPP gas, per se. However, it was the position of the Examiner that the broad recitation of "MAPP gas" reads on the disclosed hydrocarbon mixtures of Virey. Applicant respectfully traverses this contention.

"MAPP" is a registered trademark for the stabilized liquified mixture of methylacetylene and propadiene gases. In particular, MAPP gas is a specific one of approximately 26 different methylacetylene-propadiene (MPS) gases marketed. The disclosed hydrocarbon mixtures of Virey fail to disclose MAPP gas, as required by applicant's claims 1-10.

In addition, Virey fails to disclose or suggest the use of "90% by volume of MAPP gas" as required by applicant's claims 1-10.

The Examiner further concedes that Virey does not teach mold heating, per se. However, the Examiner contends that it would have been obvious to a person of ordinary skill in the art at the time the invention was made to expect mold heating to occur in the process of Virey because the requirement for an oxygen-rich combustion in the flame and a minimum desired temperature suggested that mold heating would have been inherent in the mold lubrication process.

The Examiner further concedes that Virey does not teach mold heating prior to or during a production run. However, the Examiner contends that it would have been obvious to a person of ordinary skill in the art at the time the invention was made to heat molds prior to or during a production run since mold lubrication was done during a production run and Virey taught preferred flame characteristics.

Applicant respectfully traverses the above-mentioned Examiner contentions based on the following.

Claims 1-10 are not obvious in view of Virey. Indeed, Virey directs the artisan away from the method required by applicant's claims 1-10. In particular, Virey teaches a process for providing a lubrication layer on a surface of an object which contacts an article, in which the layer of lubricant is periodically deposited onto the surface, the process comprising producing said layer of lubricant by an oxygen-fuel superstoichiometric flame having a temperature higher than 2000° K. and an oxygen factor greater than 1, and injecting a gaseous hydrocarbon through the flame for a given period of time, the gaseous hydrocarbon comprising at least 15% of a constituent in respect of which the ratio of the number of the carbon atoms to the number of hydrogen atoms C/H is higher than 0.75, the rate of injection of the hydrocarbon through the flame and the temperature of the flame being controlled in such manner as to obtain a porous layer of carbonaceous particles capable of burning in air when they are transferred onto a surface of the article when the temperature of the article is equal to at least 500°C.

The burden of establishing obviousness rests upon the Examiner espousing such. *Stratoflex Inc. v Aeroquip Corp*, 713 F2d at 1534, 218 USPQ at 875 (Fed Cir 1983) .

The opportunity to judge by hindsight is particularly tempting. In re Gartside, 203 F3d 1305,

USPQ2d 1769 (2000) (guarding against falling victim to the insidious effect of a hindsight syndrome wherein that which only the inventor taught is used against its teacher).

The test to be applied is whether the claimed invention would have been obvious to one skilled in the art when the invention was made, and not to an Examiner after learning all about the invention. *Stratoflex Inc. v Aeroquip Corp*, 713 F2d 1530, 1538, 218 USPQ 871, 879 (Fed Cir 1983).

In light of the foregoing, applicant respectfully submits that Virey teaches away from applicant's invention.

Accordingly, applicant respectfully requests that the Examiner reconsider the 35 USC 103 rejection of claims 1-10 with a view towards withdrawing same.

Claims 13-20 were initially rejected under 35 USC 103 as being unpatentable over Virey in view of Eagle. The Examiner concedes that Virey does not teach changing the gas mixture while maintaining the flame to either inhibit or promote carbon skeleton formation. However, the Examiner contends that Eagle teaches similar processes wherein carbon deposits are taught to be removed by adding methane to a gas mixture fitting applicant's description of MAPP gas. The Examiner further contends that it would have been obvious to a person of ordinary skill in the art at the time the invention was made to change the mixture of Virey with natural gas because Eagle taught that a carbon deposit could be removed from a plunger by increasing the methane proportion in a MAPP gas mixture.

Applicant respectfully traverses the 35 USC 103 rejection of claims 13-20 based on the following.

Virey and/or Eagle, taken singly or in combination, fails to teach or suggest "said heating of



said glass contacting surfaces is started with a 100% mixture of MAPP gas to inhibit carbon skeleton formation; then there is introduced a small quality of natural gas which has extra hydrogen atoms to give a suppressive influence for carbon formation; and said heating of said glass contacting surfaces is maintained to avoid any chance of dirty glass contacting surfaces”, as required by applicant’s claim 13 and claims 14-20 depending directly or indirectly therefrom.

It should be noted that the C-53 gas disclosed by Eagle is not “a 100% mixture of MAPP gas” as required by applicant’s claim 13. In addition, when the Examiner asserting obviousness must rely upon a combination of prior art references to establish obviousness, the Examiner bears the burden of showing some teaching or suggestion in these references which support their use in combination. *W.L. Gore and Associates Inc v Garlick Inc*, 721 F.2d at 1552, 220 USPQ at 312. It is legal error to place this burden on the applicant.

The genius of invention is often a combination of known elements which in hindsight seems preordained. To prevent hindsight invalidation of patent claims, the law requires some “teaching, suggestion or reason” to combine cited references. *Gambro Lundia AB v. Baxter Healthcare Corp*, 110 F.3d 1573, 1579, 42 USPQ2d 1378, 1383 (Fed. Cir. 1997).

The opportunity to judge by hindsight is particularly tempting. Consequently, the tests of whether to combine references need to be applied rigorously. *In re Dembiczak*, 175 F.3d 994, 999, 50 USPQ2d 1614, 1617 (Fed. Cir. 1999); *In re Gartside*, 203 F.3d 1305, 53 USPQ 2d 1769 (2000) (guarding against falling victim to the insidious effect of a hindsight syndrome wherein that which only the inventor taught is used against its teacher).

Whether a motivation to combine prior art references has been demonstrated is a question of fact. *Winner International Royalty Corp. v. Wang*, 202 F.3d 1340, 1348, 53 USPQ2d 1580, 1586 (Fed. Cir. 2000).

It is impermissible for the Examiner to first ascertain factually what applicant did, and then view the prior art in such a manner as to select from the random facts of that art only those which may be modified and then utilized to reconstruct applicant's invention from such prior art. In re Shuman, 361 F.2d 1008, 1012, 150 USPQ 54, 57 (CCPA 1966).

The test to be applied is whether the claimed invention would have been obvious to one skilled in the art when the invention was made, not to an Examiner after learning all about the invention. Stratoflex, Inc. v. Areoquip Corp., 713 F.2d 1530, 1538, 218 USPQ 871, 879 (Fed. Cir. 1983).

Inventions must be held to be nonobvious where neither any reference, considered in its entirety, nor the prior art as a whole, suggested the combination claimed. Fromson v. Advance Offset Plate, Inc., 755 F.2d 1549, 1556, 225 USPQ 26, 31 (Fed. Cir. 1985); ACS Hospital Systems, Inc. v. Montefiore Hospital, 732 F.2d 1572, 1577, 221 USPQ 929, 932-33 (Fed. Cir. 1984).

Nowhere does the Office Action indicate where in the prior art there might be a suggestion of combining teachings of the individual references, or how, if there was such a suggestion, such combination would equal any invention claimed by applicant.

In view of the foregoing, applicant respectfully requests that the Examiner reconsider the 35 USC 103 rejection of claims 13-20 with a view toward withdrawing same.

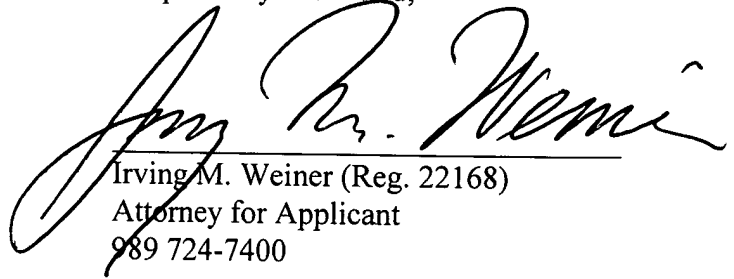
The foregoing distinctions and arguments apply with even greater force to new claims 21-29 which are clearly patentable over the cited art.

The application is now believed to be in condition for allowance and a notice to this effect is earnestly solicited.

Favorable reconsideration is respectfully requested.

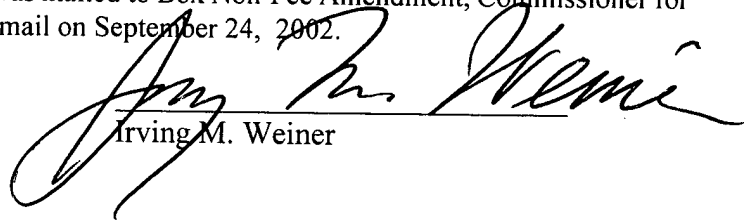
Respectfully submitted,

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I hereby certify that the foregoing amendment was mailed to Box Non-Fee Amendment, Commissioner for Patents, Washington, D.C. 20231 as first class mail on September 24, 2002.

  
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